学校编码：10384　　分类号_____密级_____
学　　号：20051302479　　UDC_____

厦门大学

硕　士　学　位　论　文

网格技术对军队信息化建设的影响研究

The Study on Influences of Grid-Technology on Army's Information Construction

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论文提交日期：2008 年 5 月
论文答辩时间：2008 年 8 月
学位授予日期：2008 年　月

答辩委员会主席：_____

评阅人：_____

2008 年 8 月

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摘要

网格是一种新型的分布式计算技术，被称为继传统因特网、万维网之后的第三代因特网应用。网格的目标是把整个因特网整合成一台巨大的超级虚拟计算机，把分散在不同地理位置的资源虚拟成为一个空前强大的信息系统，实现互联网上所有资源的互联互通，完成计算资源、存储资源、通信资源、软件资源、信息资源、知识资源和专家资源等资源的全面共享。

当前，以信息化为特征的新军事变革正在全球兴起。利用信息领域的最新、最高技术成果来促进我军的新军事变革，对国家和军队具有战略意义。运用网格技术，建立安全、高效的军事网格，是推进军队信息化建设的一条捷径。

军事网格是依靠网格技术粘合起来的“系统之系统”，它将分布于陆、海、空、天各个领域的声、光、电、磁等传感器、通信设施、交战武器等全部军事力量融合成一个有机整体，提供支持一体化联合作战的信息平台，是军事力量的倍增器。

军事网格是实现信息化作战的先进技术手段，它的建设和使用，将对战场环境带来一系列变化，对军队信息化建设带来一系列影响。

论文前半部分论述网格技术，首先介绍网格是什么，为什么需要网格，然后系统介绍了网格的体系结构、网格管理、网格性能评价与优化等。在网格管理这一章，重点介绍了网格中的信息管理、资源管理、数据管理、通信与安全管理、作业管理、公共管理等管理模块的功能及实现。

论文后半部分研究探讨网格技术在军事领域的应用，第六章军事网格，介绍了军事网格的组成，研究了军事网格面临的问题，提出了对我军网格建设的建议。第七章是军事网格对战场环境的影响，研究探讨了军事网格的运用对指挥部、指挥系统、作战力量编组部署、作战方式、作战效果、战场防御等方面的影响。第八章研究军事网格对军队信息化建设的影响，就军事网格要求创新军事思维、牵引信息化武器装备发展、加速军队组织体制调整、推动精确化后勤与装备保障建设、促进作战训练和军事理论研究等方面进行了探讨。

关键词： 网格技术；军事网格；信息化建设。

ABSTRACT

The grid,which is intituled the third era internet application after the traditional Internet and WWW, is a new type of contributed supercomputer technology.The aim of the grid is to integrate the whole internet into an enormous super-virtual computer, and to virtual the resources spreading in different locations into a super-power informational system, and then all the resources in the Internet can contact by each other, which implement the all-sided share of many kinds of resources containing computer resource, memory resource, communication resource, software resource ,informational resource, knowledge resource and expert resource , etc.

Nowadays, the new military revolution which is characterized by the informationization is uprising around the glogal. It has strategic meaning to accelerate the new military revolution for our country and army by making use of the newest and the highest technology. establishing the safe、efficient military grid according to the grid technology is a shortcut to accelerate the army's information construction.

Military grid is a "system of system" , which agglutinated by replying on grid technology, it can intergrate all the military powers into a organic whole, and support the information platform of integrated joint operations , the military powers are the sensors of sound, light, electricity, magnetic and other,the communications facilities, the warring weapons, and so on. It is a multiplier of military force.

Military grid is an advanced technical method to implement information warfare. Its construction and application will bring about a series of changes and influences to the battlefield enviroment, to the army's information construction.

Papers on the first part discusses the grid technology. Firstly, it introduces what is grid, and why need grid, and then introduces systemly the grid architecture, grid management, grid performance evaluation and optimization, and so on. The chapter about grid management, focus on the function and implementation of management models which include information management model, resource management model, data management model, communication and security management model, job management model and common management model, etc.

Papers on the latter part researches and discusses the grid technology's application in military. The sixth chapter about military grid, introduces the components of military grid, studies the problems facing on military grid, and brings forward some suggestions on our Military Grid construction. The seventh chapter analyzes how Military Grid influences the battlefield, researches and discusses deeply that the Military Grid's application will bring influences on command department, command system, the organization of military power, warfare method, warfare effectiveness and battlefield defences and so on. The eighth chapter researches and discusses how Military Grid influences the army information construction. The discussed contents include many aspects, Military Grid requires to innovate military thought, and how to draught the development of informational weapons and equipments, how to accelerate the adjustment of army's organization and system, how to promote the development of exactitude logistics and equipment guarantee, how to accelerate warfare trainning and military theory research, etc.

Keywords: Grid Technology；Military Grid; Information Construction

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